

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1 1. (Currently Amended) A multi-layer integrated semiconductor structure, comprising:
2 a first semiconductor structure having a plurality of semiconductor elements associated
3 with a first semiconductor signaling technology;
4 a second semiconductor structure having a plurality of semiconductor elements
5 associated with a second semiconductor signaling technology; and
6 an interface disposed between ~~to couple~~ a first surface of the first semiconductor structure
7 ~~and to~~ a first surface of the second semiconductor structure, ~~wherein the interface having~~
8 ~~includes~~ at least a first portion adapted to provide a communication interface between the first
9 ~~and second semiconductor structures~~ structure and the second semiconductor structure and at
10 least a second portion adapted to reduce electrical interference between signals propagating
11 along the first and second semiconductor structures with at least one of the first and second
12 interface portions corresponding to a conductive bonding interface which secures the first surface
13 of the first semiconductor structure to the first surface of the second semiconductor
14 structure ~~structure and the second semiconductor structure.~~

1 2. (Currently Amended) The multi-layer integrated semiconductor structure of claim 1,
2 wherein the first portion of the interface includes an electrically conductive adhesive material
3 which secures the first surface of the first semiconductor structure to the first surface of the
4 second semiconductor structure.

1 3. (Original) The multi-layer integrated semiconductor structure of claim 1, wherein the first
2 portion of the interface includes an electrically conductive material.

1 4. (Original) The multi-layer integrated semiconductor structure of claim 1, wherein the second
2 portion of the interface includes an electrically conductive adhesive material.

1 5. (Original) The multi-layer integrated semiconductor structure of claim 4, wherein the
2 electrically conductive adhesive material is grounded.

- 1 6. (Original) The multi-layer integrated semiconductor structure of claim 5, wherein the
2 electrically conductive adhesive material includes at least one of copper, gold, aluminum or a
3 metal alloy.
- 1 7. (Original) The multi-layer integrated semiconductor structure of claim 1, wherein the second
2 portion of the interface includes a dielectric adhesive material.
- 1 8. (Original) The multi-layer integrated semiconductor structure of claim 7, wherein the
2 dielectric adhesive material includes an organic material.
- 1 9. (Original) The multi-layer integrated semiconductor structure of claim 7, wherein the
2 dielectric adhesive material includes an inorganic material.
- 1 10. (Original) The multi-layer integrated semiconductor structure of claim 1, wherein the first
2 semiconductor signaling technology includes digital signaling related technology.
- 1 11. (Original) The multi-layer integrated semiconductor structure of claim 1, wherein the
2 second semiconductor signaling technology includes analog signaling related technology.
- 1 12. (Currently Amended) The multi-layer integrated semiconductor structure of claim 1,
2 wherein both the first and second interface portions are provided from an electrically conductive
3 adhesive which is adapted to adhesively couple the first surface of the first semiconductor
4 structure to the first surface of the second semiconductor structure.
- 1 13. (Original) The multi-layer integrated semiconductor structure of claim 12, wherein the first
2 surface of the first semiconductor structure corresponds to a top surface of the first
3 semiconductor structure.
- 1 14. (Original) The multi-layer integrated semiconductor structure of claim 13, wherein the first
2 surface of the second semiconductor structure corresponds to a bottom surface of the second
3 semiconductor structure.

1 15. (Original) The multi-layer integrated semiconductor structure of claim 13, wherein the first
2 surface of the second semiconductor structure corresponds to a top surface of the
3 second semiconductor structure.

1 16. (Original) The multi-layer integrated semiconductor structure of claim 12, wherein the first
2 surface of the first semiconductor structure corresponds to a bottom surface of the first
3 semiconductor structure.

1 17. (Currently Amended) The multi-layer integrated semiconductor structure of claim 16,
2 wherein the first surface of the second semiconductor structure corresponds to a top surface of
3 the second semiconductor structure.

1 18. (Original) The multi-layer integrated semiconductor structure of claim 16, wherein the first
2 surface of the second semiconductor structure corresponds to a bottom surface of the second
3 semiconductor structure.

1 19. (Currently Amended) The multi-layer integrated semiconductor structure of claim 1,
2 wherein both the first and second portions of said interface are provided from an electrically
3 conductive bonding material ~~further including an adhesive disposed at least between the second~~
4 ~~portion of the interface and the first surface of the second semiconductor structure.~~